# PATENT ABSTRACTS OF JAPAN

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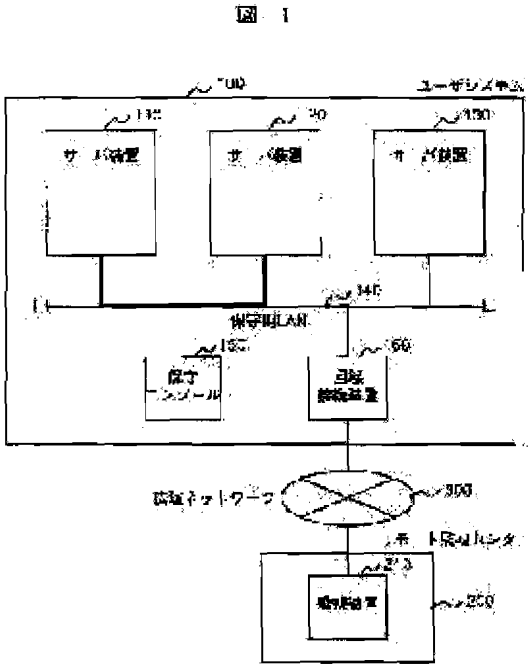
## (54) COMPUTER SYSTEM AND RENTAL METHOD

(57)Abstract:
PROBLEM TO BE SOLVED: To account a rental charge according to operating time in a computer system having a rental server.
SOLUTION: A user system 100 and a remote monitoring center 200 are connected by a wide area network 300, and a use requesting telegram from a maintenance console 150 is received by the remote monitoring center 200 together with a server device. Server ID included in the use requesting telegram is actual server ID and virtual server ID, and the latter is used for a use request of the rental server. A monitor 210 converts the virtual server ID into the actual server ID, and transmits the ID to the server device. The server device executes rising processing on a server when the received server ID coincides with one s own server ID. The remote monitoring center 200 accounts by measuring the operating time of the server device with every user with converted ID-received time as the origin.



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## CLAIMS

[Claim(s)]
[Claim 1] In the user system which connected the operating processor of at least one rental by LAN for maintenance, and the computer system which connected in the network the remote monitor center which supervises the operating condition The console which is connected to said LAN for maintenance and publishes use demand wording of a telegram to said operating processor, The service processor which starts the operating processor concerned when it is in said operating processor and the use demand wording of a telegram addressed to self is received, The computer system characterized by forming the supervisory equipment which is in said remote monitor center, receives said use demand wording of a telegram through said network, and transmits the real server ID based on ID of this wording of a telegram to said operating processor.
[Claim 2] It is the computer system characterized by using the same real server ID as the server ID in which said operating processor has ID of said use demand wording of a telegram in claim 1, or a different virtual server ID.
[Claim 3] The computer system characterized by preparing the service processor which is built in said operating processor, operates by auxiliary power in claims 1 or 2, and performs main power supply injection and starting processing in response to the server ID from said remote monitor center.
[Claim 4] In the rental approach of a computer system of having tied with the network the operating processor of one or more sets of rentals and the remote monitor center which supervises the operating condition connected by LAN for maintenance Said remote monitor center receives the use demand published to said operating processor through said network. The rental approach characterized by measuring the time of said operating processor based on the user ID and Server ID which are contained in said use demand, and charging a user according to this time.
[Claim 5] The server ID contained in said use demand in claim 4 is the rental approach characterized by changing the virtual server ID on said use demand into the real server ID, and obtaining it.

[Translation done.]

## DETAILED DESCRIPTION

[Detailed Description of the Invention]
[0001]
[Field of the Invention] This invention relates to a computer system equipped with a server, and the rental business of a server.
[0002]
[Description of the Prior Art] The rental system of conventional server equipment is not concerned with the time of business, but the rental tariff is charged according to the loan period. The user had to rent server equipment by the system configuration doubled with the peak load of business, and when the load factor of the business processed at the time of a stationary was low, the inclination for the rental tariff per time to become high was suited.
[0003]
[Problem(s) to be Solved by the Invention] The purpose of this invention is to offer the computer system and the rental approach of charging a rental tariff according to a time in view of the trouble of the conventional technique.
[0004]
[Means for Solving the Problem] In the user system to which this invention which solves the above-mentioned technical problem connected the operating processor of at least one rental by LAN for maintenance, and the computer system which connected in the network the remote monitor center which supervises the operating condition The console which is connected to said LAN and publishes use demand wording of a telegram to said operating processor, The service processor which starts the operating processor concerned when it is in said operating processor and the use demand wording of a telegram addressed to self is received, It is in said remote monitor center, said use demand wording of a telegram is received through said network, and it is characterized by forming the supervisory equipment which transmits the real server ID based on ID of this wording of a telegram to said operating processor.
[0005] ID of said use demand wording of a telegram is characterized by using the same real server ID as the server ID which said operating processor has, or a different virtual server ID.
[0006] Moreover, it is built in said operating processor, operates by auxiliary power, and is characterized by preparing the service processor which performs main power supply injection and starting processing in response to the server ID from said remote monitor center.
[0007] Moreover, it is characterized by preparing the accounting section according to the time of said operating processor for every user of said use demand wording of a telegram in said remote monitor center.
[0008] In the rental approach of a computer system of furthermore having tied with the network the operating processor of one or more sets of rentals and the remote monitor center which supervises the operating condition to which the rental approach of this invention was connected by LAN for maintenance Said remote monitor center receives the use demand published to said operating processor through said network. The time of said operating processor is measured based on the user ID and Server ID which are contained in said use demand, and it is characterized by charging a user according to this time.
[0009] According to this invention, to the use demand of an operating processor (an example server equipment), the changed specification demand wording of a telegram which is equivalent to licence from supervisory equipment is published, and the corresponding operating processor is performed.

Furthermore, the rental system which charges a rental tariff according to a time was realized by integrating the time of an operating processor and charging it.
[0010]
[Embodiment of the Invention] Drawing 1 shows the example of the computer system by this invention. A computer system consists of wide area networks 300 which connect the user system 100, the remote monitor center 200, and these.
[0011] The user system 100 consists of digital service units 160 for connecting to a wide area network 300 the maintenance console 150 for directing starting of the server equipments 110, 120, and 130 which process business, and these servers equipment, and a halt and LAN140 for maintenance (Local Area Network) which connects these mutually, and LAN140 for maintenance. It connects with a wide area network 300, and the remote monitor center 200 receives use demand wording of a telegram from the user system 100, and consists of supervisory equipment 210 which transmits licence wording of a telegram. Here, suppose that the server equipments 120 and 130 are installed as server equipment 110 and equipment for a rental as a user's possession equipment.
[0012] Drawing 2 shows the example of server equipment. Server equipment operates by the auxiliary power 113 and auxiliary power which are always in the injection condition by external electric supply, and consists of main power supplies 112 of the service processor 114 which is connected to LAN for maintenance and performs injection of a main power supply, and starting control of a system unit, the system unit 111 which performs processing of business, and a system unit. A user's use demand wording of a telegram is told to a service processor 114 through the maintenance console 150.
[0013] Drawing 3 shows the example of the service processor in server equipment. A service processor 114 consists of user ID of the control section 115 which performs starting control of the main power supply 112 of a system unit 111 and a system unit, the use demand wording-of-a-telegram collating section 116 which performs collating of the use demand wording of a telegram which received, and self-equipment, the user ID and the server equipment ID attaching part 118 holding server equipment ID, and the wording-of-a-telegram transmit/receive control section 117 that receives use demand wording of a telegram through LAN for maintenance.
[0014] The use demand wording-of-a-telegram collating section 116 performs injection of a main power supply 112, and starting of a system unit 111 by the control section 115, when the server ID contained in a user's use demand wording of a telegram is in agreement with the self-server ID of an attaching part 118.
[0015] In addition, a service processor is good by PC which had the server equipment which can be thrown in and the WOL (powering on via Wake On LAN:LAN) device of a power source via LAN equipped with the remote powering-on device, or WAN.
[0016] Drawing 4 shows the data configuration of wording of a telegram. Wording of a telegram consists of server equipment ID assigned uniquely, in order to identify the user ID and server equipment which were assigned uniquely [ in order to identify the wording-of-a-telegram classification ID and the user showing the classification of wording of a telegram ]. There are the use demand wording of a telegram 1, the use termination wording of a telegram 2, and normal termination wording of a telegram that shows that starting processing of server equipment was completed normally in wording-of-a-telegram classification. Server equipment ID has Imagination ID and real ID, and, as for the server ID of a user's possession equipment, its both correspond. However, both differ and, as for the server equipment ID of the equipment for a rental, the virtual server ID is used by the use demand wording of a telegram from a user.
[0017] Drawing 5 shows the example of the supervisory equipment of a remote monitor center. A time integrates by the reception holding the wording-of-a-telegram classification ID showing the classification of the wording-of-a-telegram transmit/receive-control section 213 which controls transmission and reception of use demand wording of a telegram, the use demand wording-of-a-telegram collating section 212 which collate the use demand wording of a telegram which received, and wording of a telegram, the user ID for collating, and server equipment ID of wording-of-a-telegram classification, user ID and a server equipment ID attaching part 214, and use demand wording of a telegram, and reception of use termination wording of a telegram, and supervisory equipment 210 consists of accounting control sections 211 for charging.
[0018] Drawing 6 shows the data configuration of the user ID and the server equipment ID attaching part 118 in server equipment. Server equipment has the self-server ID and user ID, and refer to it for

ne use demand wording-of-a-telegram collating section 116.
[0019] Drawing 7 shows the data configuration of the user ID and the server equipment ID attaching part 214 in supervisory equipment. Virtual server equipment ID and real server equipment ID are assigned to each server equipment, respectively, and when it is user possession equipment (server 110), the server equipment ID of the virtual server ID and real server equipment ID is the same, and in agreement with the server equipment ID which server equipment holds. On the other hand, in the case of the equipment for a rental (servers 120 and 130), the virtual server ID and real server equipment ID are assigned according to an individual, and it is in agreement with the server equipment ID with which real server equipment ID holds server equipment.
[0020] Drawing 8 shows the flow chart by 1 of the rental system by this invention example. A user transmits the use demand wording of a telegram of server equipment which performs processing from the console 150 for maintenance, in order to perform processing of business (S1). Use demand wording of a telegram is received by the server equipment connected by LAN140 for maintenance (S2). Furthermore, it is received by the supervisory equipment 210 of the remote maintenance center 200 connected by the wide area network 300 via a digital service unit 160 (S3).
[0021] It judges whether the supervisory equipment 210 of a remote monitor center collates with registration data ( drawing 7 ) the user ID and Server ID of use demand wording of a telegram ( drawing 4 ) which received, and agrees with (S4), the user ID registered, and the virtual server ID (S5). Here, when in agreement with the user ID and the virtual server ID which are registered, the virtual server ID for a rental is transposed to the corresponding real server ID, and the use demand wording of a telegram by the real server ID is transmitted to server equipment (S6). On the other hand, when not in agreement, it ends.
[0022] It judges whether server equipment is in agreement with the self-server ID by collating with the server ID which holds the server ID of the use demand wording of a telegram which received in self-equipment ( drawing 6 ) (S7) (S8). When in agreement with the self-server ID, the main power supply of a system unit is switched on and (S9) and starting processing are started (S10). If starting processing is completed, normal termination wording of a telegram ( drawing 4 ) will be transmitted to the maintenance console 150 (S11). On the other hand, when not in agreement with the self-server ID, it ends.
[0023] In the case of the use demand wording of a telegram to user possession equipment (server 110), for the real server ID, the server ID of server equipment 110 and use demand wording of a telegram is in agreement, and, according to this, main power supply injection and starting processing are performed. On the other hand, for the virtual server ID, in the case of the use demand wording of a telegram to the equipment for a rental (servers 120 and 130), it is not in agreement with the server ID of server equipment, and it is once ended (S8 ->N). However, in the remote monitor center 200, since the virtual server ID to hold is in agreement with the virtual server ID of use demand wording of a telegram, the use demand wording of a telegram transposed to the real server ID is transmitted to a server equipment side. Server equipment receives this (S2) and the server equipment corresponding [ Server's ID ] performs main power supply injection and starting processing.
[0024] The maintenance console 150 waits for normal termination wording of a telegram after use demand wording-of-a-telegram transmission (S12). Reception of termination wording of a telegram performs processing of business (S15). (S14) And termination of processing of business transmits use termination wording of a telegram (S16). When normal termination wording of a telegram is not able to be received in convention time amount, it ends (S13).
[0025] If use termination wording of a telegram is received (S17), server equipment will suspend processing (S18) and will intercept a main power supply (S19). Accounting will be performed and the remote monitor center 200 will be completed, if use termination wording of a telegram is received (S20) (S21).
[0026] Since the virtual server ID is changed into the real server ID and a server is passed when according to this example the server ID of a use demand is supervised in the remote monitor center when it rents a server, and use demand wording of a telegram is published using the virtual server ID, the server corresponding [ Server's ID ] can perform operating processing. Since a user should just input Server ID, without being conscious of a fruit/imagination, he is user-friendly. Of course, mixture with the server of user possession is also possible, and when starting a user possession server, the real server ID should just be inputted.

[0027] Drawing 9 shows the flow of the accounting by this invention. The accounting control section 211 of supervisory equipment 210 will start the addition of a time about the user ID, if the use demand wording of a telegram whose virtual server ID corresponded is received (S30) (S31). And if the addition of a time is continued (S33) and it receives, the addition of a time will be ended (S34), and accounting computation (S35) according to a time is carried out until it checks reception of the use termination wording of a telegram of the same user ID (S32).
[0028] Since accounting according to the time amount for which each user is using the server of a rental is attained according to this example, accounting becomes rationally cheap.
[0029]
[Effect of the Invention] Imagination ID which is different from a server, same real ID, and a server in the server ID contained in a use demand of a user in the computer system containing one or more rental servers according to this invention is prepared, the remote monitor of the use demand is carried out, in Imagination ID, it is changing into real ID and passing a server, and the effectiveness which rents a desired server and can be used for operating processing is.
[0030] Moreover, since it integrates from reception of a use demand of the time of a rental to termination for every user, it is effective in rational and cheap accounting being attained.

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[Translation done.]

## DESCRIPTION OF DRAWINGS

[Brief Description of the Drawings]
[Drawing 1] The block diagram showing the example of the computer system of this invention.
[Drawing 2] The block diagram showing the example of server equipment.
[Drawing 3] The block diagram showing the example of the service processor in server equipment.
[Drawing 4] The data block diagram showing the example of wording of a telegram.
[Drawing 5] The block diagram showing the example of the supervisory equipment of a remote monitor center.
[Drawing 6] The data block diagram showing the example of the user ID and the licence wording-of-a-telegram attaching part of server equipment.
[Drawing 7] The data block diagram showing the example of the user ID and the server equipment ID attaching part of supervisory equipment.
[Drawing 8] The flow Fig. showing the example of the rental system by this invention.
[Drawing 9] The flow Fig. showing the flow of accounting.
[Description of Notations]
100 [ — Server equipment, 140 / — LAN for maintenance, 150 / — The console for maintenance, 160 / — A digital service unit, 200 / — A remote monitor center, 210 / — Supervisory equipment, 300 / — Wide area network. ] — A user system, 110 — Server equipment, 120 — Server equipment, 130